California Regional Water Quality Control Board
Santa Ana Region

ORDER NO. 96-18
NPDES NO. CAG918001

GENERAL GROUNDWATER CLEANUP PERMIT FOR DISCHARGES OF EXTRACTED AND TREATED GROUNDWATER RESULTING FROM THE CLEANUP OF GROUNDWATER POLLUTED BY PETROLEUM HYDROCARBONS AND/OR SOLVENTS

for the
Santa Ana Region

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Board), finds that:

1. On October 18, 1991, the Regional Board adopted Order No. 91-63, National Pollutant Discharge Elimination System (NPDES) Permit No. CAG918001. Order No 91-63 contained the waste discharge requirements for discharges into surface waters of extracted and treated groundwater resulting from the cleanup of groundwater polluted by petroleum hydrocarbons and/or solvents at service stations and similar sites. Order No. 91-63 expired on October 1, 1996.

2. Order No. 91-63 satisfied all the criteria cited in 40 CFR[1] 122.28 and as such, was classified as a General NPDES Permit. 40 CFR 122.28 pertains to the issuance of general permits to regulate discharges of waste which meet the following criteria:

    a. Waste discharges involving the same or substantially similar types of operations;
    b. Discharge the same types of wastes;
    c. Require the same effluent limitations or operating conditions;
    d. Require the same or similar monitoring; and
    e. Are more appropriately regulated under a general permit rather than individual permits.

3. The adoption of Order No. 91-63 has expedited the processing of numerous applications for waste discharge requirements and the early implementation of groundwater cleanup programs. The General NPDES Permit allowed the Regional Board to better utilize limited staff resources.

1 *CFR is the Code of Federal Regulations*

4. It is anticipated that within the next few years many more groundwater cleanup programs will be initiated on new sites where groundwater is found to be polluted with petroleum hydrocarbons and/or solvents.

5. Currently, there are approximately 170 enrollees[2] under Order No. 91-63. Order No. 91-63 expires on October 1, 1996. Most of these enrollees will wish to continue the discharges from their groundwater cleanup facilities. Therefore, renewal of this general permit is necessary to continue this expedited permitting process and to promote the continued operation of existing groundwater remediation projects.

6. It is necessary to renew the waste discharge requirements contained in Order No. 91-63.

7. Entity(ies)/individual(s) proposing to discharge treated groundwater[3] are hereinafter referred to as discharger and are subject to the terms and conditions of this order.

8. For coverage under this general permit, a discharger is required to submit an application for the proposed discharge together with the certification report required by Section H.4: "REQUIRED REPORTS AND NOTICES", and to get approval from the Executive Officer. If the proposed discharge meets the requirements of this order, the Executive Officer will provide the discharger with a written authorization to initiate the discharge. If not, an individual NPDES permit will be developed for consideration by the Regional Board.

9. This order includes an effluent limitation for lead for those sites polluted with leaded gasoline. For freshwater discharges the toxicity of lead has been determined to be hardness dependent, hence for freshwater discharges the effluent limitation for lead is expressed in an equation form[4]. This order requires that for those sites polluted with leaded gasoline, and where a discharge to freshwater is proposed, the discharger must submit for approval by the Executive Officer of the Regional Board a fixed hardness value based on the 5th percentile of effluent hardness measurements or the ambient receiving water hardness measurements. For saltwater discharges the effluent limitation is a fixed value based on the U.S. EPA's Criteria for Priority Toxic Pollutants.

10. This order permits the discharge of treated groundwater[3] which meet the requirements of this order into surface waters. It does not preempt or supersede the authority of municipalities, flood control agencies, or other local agencies to prohibit, restrict, or control discharges of waste to storm drain systems or other water courses subject to their jurisdiction.

11. The Regional Board recognizes the need to consider any unique factors relating to a discharger. In order to consider any unique factors applicable to a particular discharger or

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2 *refers to those dischargers who are currently covered under the general permit.*

3 *polluted by petroleum hydrocarbons and/or solvents.*

4 *See Federal Register / vol. 60. No. 86 / Thursday, May 4, 1995 / Rules and regulations / Pages 22229 and 22237.*

discharge, it will be necessary for the discharger to apply for an individual NPDES permit in accordance with Section 13376 of the California Water Code.

12. The Executive Officer of the Regional Board or the Regional Administrator of the EPA may require any person authorized to discharge waste by this general permit to subsequently apply for and obtain an individual NPDES permit. Any interested person may petition the Executive Officer or the Regional Administrator to take action in accordance with this finding. Cases where an individual NPDES permit may be required include the following:

    a. The discharger is not in compliance with the conditions of this order or the discharge authorization letter from the Executive Officer;

    b. A change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source;

    c. Effluent limitation guidelines are promulgated for point sources covered by the general NPDES permit;

    d. Changes to water quality control plan containing requirements applicable to such point sources are approved; or

    e. The requirements of 40 CFR 122.28 (a) are not met.

13. A revised Water Quality Control Plan (Basin Plan) became effective on January 24, 1995. The Basin Plan contains beneficial uses and water quality objectives for waters in the Santa Ana Region.

14. The existing and potential beneficial uses of surface waters in the Santa Ana Region include:

    a. Municipal and Domestic Supply,
    b. Agricultural Supply,
    c. Industrial Service Supply,
    d. Industrial Process Supply,
    e. Groundwater Recharge,
    f. Hydropower Generation,
    g. Water Contact Recreation,
    h. Non-contact Water Recreation
    i. Warm Freshwater Habitat,
    j. Limited Warm Freshwater Habitat,
    k. Cold Freshwater Habitat,
    l. Preservation of Biological Habitats of Special Significance,
    m. Wildlife Habitat,
    n. Rare, Threatened or Endangered Species, and
    o. Spawning, Reproduction, and Development.

15. Many surface waters within the region recharge underlying groundwater basins. The

existing and potential beneficial uses of groundwater within the Santa Ana River include:

a. Municipal and Domestic Supply,
b. Agricultural Supply,
c. Industrial Service Supply, and
d. Industrial Process Supply

16. The requirements contained in this order are necessary to implement the Basin Plan.

17. Effluent limitations and national standards of performance established pursuant to Section 301, 302, 303(d), 304, 306, and 307 of the Federal CWA and amendments thereto are applicable to this type of discharges.

18. On June 8, 1989, pursuant to 40 CFR 122.28, the State Water Resources Control Board (hereinafter State Board), applied to the Environmental Protection Agency (hereinafter EPA) for revisions of its NPDES program in accordance with 40 CFR 123.62 and 403.10. The application included a request to add general permit authority to its approved NPDES program. On September 22, 1989, Region IX EPA approved the State Board's request and granted authorization for the State's issuance of general NPDES permits.

19. The Regional Board has considered antidegradation pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16 and finds this discharge is consistent with those provisions.

20. In accordance with California Water Code Section 13389, the issuance of waste discharge requirements for this discharge is exempt from those provisions of the California Environmental Quality Act contained in Chapter 3 (Commencing with Section 21100), Division 13 of the Public Resources Code.

21. The Regional Board has notified interested agencies and persons of its intent to issue general waste discharge requirements for groundwater cleanup discharges resulting from the cleanup of groundwater, and has provided them with an opportunity to submit their written views and recommendations.

22. The Regional Board, in a public meeting, heard and considered all comments pertaining to general waste discharge requirements for discharges of treated groundwater resulting from groundwater cleanup projects.

IT IS HEREBY ORDERED that dischargers of treated groundwater polluted by petroleum hydrocarbons and/or solvents from service stations and similar sites, their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act as amended and regulations and guidelines adopted thereunder, shall comply with the following:

A. DISCHARGE SPECIFICATIONS:

1. The discharge of wastes shall not contain constituent concentrations in excess of the following limits:

Constituent	Maximum Daily Concentration Limit - µg/l (unless noted otherwise)
Total Petroleum Hydrocarbons	100.0
Benzene	1.0
Toluene	10.0
Xylene	10.0
Ethylbenzene	10.0
Carbon Tetrachloride	0.5
Chloroform	5.0
Dichlorobromomethane	5.0
Methyl Ethyl Ketone	10.0
Methyl Isobutyl Ketone	10.0
Naphthalene	10.0
Tetrachloroethene (PCE)	5.0
Trichloroethylene (TCE)	5.0
1,1-Dichloroethane	5.0
1,1-Dichloroethylene	6.0
1,2-Dichloroethylene	10.0
1,1,1-Trichloroethane (TCA)	5.0
Total Residual Chlorine[5]	0.1 mg/l
Total Dissolved Solids (TDS)	See Section A.6. and Section A.7., below
Total Inorganic Nitrogen (TIN)	See Section A.6. and Section A.7., below
Suspended Solids	75 mg/l
Sulfides	0.4 mg/l

5 *If chlorine is used for treatment or disinfection of wastes.*

2. The pH of the discharge shall be within 6.5 and 8.5 pH units (see also Receiving Water Limitations B.2.g.).

3. There shall be no visible oil and grease in the discharge.

4. For freshwater discharges, the total lead maximum daily concentration of the discharge shall not exceed the computed value using the equation[6]:

$$Total\ Lead = CF \times e^{[(\ln Hardness)(1.273)-4.705]}$$

a. For discharges to freshwater[7] bodies use equation[6] below for determining the conversion factor (CF):

$$CF_{freshwater} = 1.46203 - [(\ln Hardness)(0.145712)]$$

5. For saltwater discharges, the total lead maximum daily concentration of the discharge shall not exceed 8 microgram per liter (µg/l).

6. For discharges to surface waters where the groundwater will not be affected by the discharge, the TDS and/or TIN of the effluent shall not exceed the water quality objectives for the receiving surface water where the effluent is discharged, as specified in Table 4-1 of the 1995 Basin Plan for the Santa Ana Region.

7. For discharges to surface waters where the groundwater will be affected by the discharge, the TDS and/or TIN concentrations of the effluent shall not exceed the water quality objectives for the surface water where the effluent is discharged nor the affected groundwater subbasin, as specified in Table 4-1 of the 1995 Basin Plan for the Santa Ana Region. The more restrictive water quality objectives shall govern. However, treated effluent exceeding the groundwater subbasin water quality objectives may be returned to the same subbasin from which it was extracted without reduction of the TDS or TIN concentrations so long as the concentrations of those constituents are no greater than when the groundwater was first extracted. Incidental increases in the TDS and TIN concentrations (such as may occur during air stripping) of treated effluent will not be considered increases for the purposes of determining compliance with this discharge specification.

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6 *The **Ln Hardness** is the natural logarithm of the average hardness of the receiving water or the 5th percentile of the treated effluent hardness, whichever is more restrictive.*

7 *Waters in which the salinity is equal to or less than 1 part per thousand 95% or more of the time.*

B. RECEIVING WATER LIMITATIONS:

1. The discharge of wastes shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Board or the State Board, as required by the Federal CWA and regulations adopted thereunder.

2. The discharge shall not cause any of the following:

   a. The undesirable discoloration of the receiving waters.

   b. The presence of objectionable odor in the receiving water.

   c. The presence of visible oil, grease scum, floating or suspended material or foam in the receiving waters.

   d. The deposition of objectionable deposits along the banks or the bottom of the stream channel.

   e. The depletion of the dissolved oxygen concentration below 5.0 mg/l in the receiving water. If the ambient dissolved oxygen concentration is less than 5.0 mg/l, the discharge shall not cause a further depression.

   f. An increase in the temperature of the receiving waters above 90 F (32 C) which normally occurs during the period of June through October, nor above 78 F (26 C) during the rest of the year.

   g. Change the ambient pH levels more than 0.5 pH units.

   h. The presence of radionuclides in concentrations that exceed the maximum permissible concentrations for radionuclides in water set forth in Chapter 5, Title 17 of the California Code of Regulations.

   i. The concentration of pollutants in the water column, sediments, or biota to adversely affect the beneficial uses of the receiving waters.

   j. The bioaccumulation of chemicals in aquatic resources to levels which are harmful to human health.

3. The discharge shall not result in acute toxicity in ambient receiving waters. The effluent shall be deemed to cause acute toxicity when the toxicity test of 100% effluent as required in Monitoring and Reporting Program No. 96-18, results in less than 90 percent survival of the standard test organisms. The discharger shall immediately stop the discharge whenever the discharge exceeds this requirement. Prior to resuming the discharge, the discharger shall identify and correct the source of the toxicity to the satisfaction of the Executive Officer.

4. The discharge shall not result in chronic toxicity in ambient receiving waters. This order contains no numeric limitation for chronic toxicity, however, the discharger must cease all discharges when the result of any individual chronic toxicity test exceeds 1.0 TU_c.

C. PROHIBITIONS:

1. The discharge of oil, trash, industrial waste sludge, or other solids directly to the surface waters in this region or in any manner which will ultimately affect surface waters in this region is prohibited.

2. The discharge of any substances in concentrations toxic to animal or plant life is prohibited.

3. The discharge of wastes to property not owned or controlled by the discharger is prohibited.

4. Odors, vectors, and other nuisances of waste origin are prohibited beyond the limits of each discharger's facility.

5. The addition of chemicals to the extracted groundwater, exclusive of chlorine to control biofouling (H_2S) in treatment systems, is prohibited except when approved by the Executive Officer..

D. COMPLIANCE DETERMINATION:

1. Compliance with Discharge Specification A.1. shall be based on the detection limits specified in Attachment "A" or lower detection limits achieved by the discharger. If the discharger develops a limit of quantitation (LOQ) specific to their matrix, the LOQ shall serve as the PQL with the approval of the Executive Officer of the Regional Board. If no method detection limit (MDL) is specified for a constituent, the MDL specified in 40 CFR 136 shall be used. If no MDL is available, the lowest practicable detection limit shall be used with the approval of the Executive Officer.

2. Compliance determinations shall be based on available analyses for the time interval associated with the effluent limitation. Where only one sample analysis is available in a specified time interval (e.g., 30-day or 4-day average), that sample shall serve to characterize the discharge for the entire interval. For intermittent discharges, the daily value shall be considered zero for days on which no discharge occurred.

3. When determining compliance, based on a single sample, with a single effluent limitation which applies to a group of chemicals (e.g., PCBs), concentrations of individual members of the group may be considered to be zero if the analytical response for individual chemicals falls below the MDL for that chemical.

Compliance with an effluent limitation based on multiple samples shall be determined through the application of appropriate statistical methods. Compliance based on a single sample analysis may be determined where appropriate, as described below.

When the effluent limitation is greater than or equal to the PQL, compliance shall be determined based on the effluent limitation and either single or multiple sample analyses.

When the effluent limitation is less than the PQL compliance determinations based on analysis of a single sample shall only be undertaken if the concentration of the constituent of concern in the sample is greater than or equal to the PQL.

When the effluent limitation is less than the PQL, and recurrent analytical responses between the PQL and the effluent limitation occur, compliance shall be determined by statistical analysis of multiple samples.

For statistical analysis, the March 1991 Technical Support Document (EPA/505/2-90-001) methodology or other methods approved by the Executive Officer of the Regional Board shall be used.

E. PROVISIONS:

1. This order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal CWA or amendments thereto. This order shall become effective 10 days after the date of its adoption provided the Regional Administrator of the Environmental Protection Agency has no objections. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

2. This order expires on October 1, 2001. However, it shall continue in force and effect until a new order is issued. Only those dischargers authorized to discharge under the expiring order will be regulated by the continued order. Upon reissuance of a new general permit, the dischargers shall file a notice of intent within 45 days of the effective date of the new order and obtain a new authorization to discharge from the Executive Officer.

3. Within forty five (45) days of the effective date of this order, those dischargers regulated under Order No. 91-63, and those dischargers under individual waste discharge requirements, who wish to be regulated under this order shall submit a notice of intent. Additional information may be required if there has been a change in ownership of facility or changes in the character and/or treatment of the discharges.

4. Neither the treatment or discharge of pollutants shall create a nuisance or pollution as defined by Section 13050 of the California Water Code.

5. The Executive Officer shall determine whether the proposed discharge is eligible for coverage under this general permit, after which, the Executive Officer may;

   a. Authorize the proposed discharge by transmitting a "Discharge Authorization Letter" to the discharge proponent (now an "authorized discharger") authorizing the initiation of the discharge under the conditions of this order and any other conditions consistent with this order which are necessary to protect the beneficial uses of the receiving waters; or,

   b. Require the discharge proponent to obtain an individual NPDES permit prior to any discharge to surface waters within the Santa Ana Region.

6. The discharge authorization letter from the Executive Officer shall specify any conditions necessary to protect the beneficial uses of the receiving waters and shall specify the Self-Monitoring Program for the proposed discharge in accordance with this order. The discharge authorization letter may be terminated or revised by the Executive Officer at any time.

7. The discharger shall submit for approval by the Executive Officer of the Regional Board a fixed hardness value based on the 5th percentile of effluent hardness measurements or the average ambient receiving water hardness measurements for those sites polluted with leaded gasoline.

8. The discharger shall comply with all requirements of this order and the terms, conditions and limitations of the discharge authorization letter.

9. The discharge shall be limited to extracted and treated groundwater and added treatment chemicals approved by the Executive Officer.

10. The discharger shall take all reasonable steps to minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.

11. The discharger shall take all reasonable steps to minimize any adverse impact to receiving waters resulting from noncompliance with any effluent limitations specified in this order, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

12. The discharger shall, at all times, properly operate and maintain[8] all facilities and systems of treatment (and related appurtenances) and control which are installed or used by the discharger to achieve compliance with this order and the conditions of the authorization letter(s) from the Executive Officer. Proper operation and maintenance shall include the following:

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8 *Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls and appropriate quality assurance procedures.*

a. Effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls and appropriate quality assurance procedures.

b. Regular maintenance and inspection of all systems.

c. Maintenance of records of the inspection results which shall be made available to the Regional Board whenever required and demanded.

13. An Operation and Maintenance (O&M) Manual shall be developed prior to the initiation of the discharge and shall be readily accessible to site operating personnel. The O&M Manual shall include the following:

a. Detailed description of safe and effective operation and maintenance of treatment processes, process control instrumentation and equipment.

b. Process and equipment inspection and maintenance schedules,

c. Describe preventive (fail-safe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events.

d. Identification and description of the possible sources of accidental loss, bypass of untreated or partially treated wastes, and polluted drainage including power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes and possible spills.

14. The discharger shall comply with the monitoring and reporting program issued by the Executive Officer with the authorization letter. Revision of this monitoring and reporting program by the Executive Officer may be necessary to confirm that the discharger is in compliance with the requirements and provisions contained in this order. Revision may be made at any time during the term of this order, and may include a reduction or an increase in the number of parameters to be monitored, the frequency of monitoring or the number and size of samples collected.

15. The discharger shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this order has not yet been modified to incorporate the requirement.

16. This order does not convey any property rights of any sort, or any exclusive privilege.

17. This order is not transferable to any person except after notice to and approval by the Regional Board.

18. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, nor protect the discharger from his liabilities under federal, state, or local laws, nor guarantee the discharger a capacity right in the receiving waters.

19. The provisions of this order are severable, and if any provision of this order, or the application of any provisions of this order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this order shall not be affected thereby.

20. Any violation of this order constitutes a violation of the CWA, its regulations, and the California Water Code, and is grounds for enforcement action and/or termination of the authorization to discharge.

21. The Regional Board, EPA, and other authorized representatives shall be allowed:

    a. Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this order;

    b. Access to copy any records that are kept under the conditions of the order;

    c. To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this order; and

    d. To photograph, sample and monitor for the purpose of assuring compliance with this order, or as otherwise authorized by the CWA.

F. PERMIT REOPENING, REVISION, REVOCATION, AND RE-ISSUANCE:

1. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal CWA, or amendments thereto, the Board will revise and modify this order in accordance with such standards.

2. This order may be reopened to address any changes in State or federal plans, policies or regulations which would affect the quality requirements for the discharges.

3. Any permit noncompliance constitutes a violation of the CWA and the California Water Code and is grounds for enforcement action; for permit or authorization letter termination, revocation and reissuance, or modification; the issuance of an individual permit; or for denial of a renewal application.

4. This order may be modified by the Regional Board prior to the expiration date to include effluent or receiving water limitations for toxic constituents determined to be present in significant amounts in the discharge through the comprehensive monitoring program included as part of this order.

5. This order may be modified, revoked and reissued, or terminated for cause. The filing of a request by a discharger for modification, revocation and reissuance, or termination of this order or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

G. PENALTIES:

1. The CWA provides that any person who violates a provision implementing sections 301, 302, 306, 307, or 308 of the CWA is subject to a civil penalty not to exceed $10,000 per day of such violation. Any person who willfully or negligently violates provisions implementing these sections of the CWA is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than 1 year, or both.

2. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

3. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both.

4. The California Water Code provides that any person who violates a waste discharge requirement or a provision of the California Water Code is subject to civil penalties of up to $5,000 per day, $10,000 per day, or $25,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil penalties of up to $10 per gallon per day, or $20 per gallon per day of violation; or some combination thereof, depending on the violation, or upon the combination of violations.

H. REQUIRED REPORTS AND NOTICES:

1. Reporting Provisions:

   a. All applications, reports, or information submitted to the Regional Board shall be signed and certified in accordance with 40 CFR 122.22.

   b. The discharger shall furnish, within a reasonable time, any information the Regional Board or EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this order. The discharger shall also furnish to the Regional Board, upon request, copies of records required to be kept by this order.

c. Except for data determined to be confidential under Section 308 of the CWA, all reports prepared in accordance with the terms of this order shall be available for public inspection at the offices of the Regional Water Quality Control Board and the Regional Administrator of EPA. As required by the CWA, effluent data shall not be considered confidential. Knowingly making any false statements on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the Act and Section 13387 of the California Water Code.

2. The discharger shall file with the Board a report of waste discharge at least 120 days before making any material change or proposed change in the character, location, volume, treatment or disposal methods of the discharge.

3. The discharger shall give advance notice to the Regional Board of any planned changes in the permitted facility or activity that may result in noncompliance with these waste discharge requirements.

4. Each discharger shall submit to the Executive Officer, as part of the application for proposed discharge, a report certifying the adequacy of each component of the proposed treatment system and the associated Operation and Maintenance (O&M) Manual. This certification shall contain a requirement-by-requirement analysis, based on accepted engineering practice, of how the process and physical design of the treatment systems will ensure compliance with this order. The design engineer[9] shall affix his/her signature, professional license number and seal to this certification.

5. In the event of any change in control or ownership of land or waste discharge facilities currently owned or controlled by the discharger, the discharger shall notify the succeeding owner or operator of the existence of this order by letter, a copy of which signed by the new owner accepting responsibility for complying this order shall be forwarded to the Executive Officer.

6. The discharger shall furnish, within a reasonable time, any information the Executive Officer may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this order. The discharger shall also furnish to the Executive Officer, upon request, copies of records required to be kept by this order.

I. APPLICATION REQUIREMENTS FOR NEW DISCHARGES:

At least 60 days before the start of a new discharge or permit expiration, the discharger shall submit an application and obtain the authorization letter from the Executive Officer to discharge treated groundwater. The application shall consist of the following information:

1. Notice of Intent to be covered under this general permit.

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9 *a registered civil engineer, registered geologist, or certified engineering geologist licensed in the State of California (Sections 6735, 7835, and 7835.1 of the California Business and Profession's Code).*

2. A site characterization study which defines the onsite contaminants and their properties, the three dimensional extent and concentration of contaminants in the subsurface, and includes a description of the geologic and hydrologic factors that control the migration of the contaminants.

3. A report which shall include the following:

   a. Chemical analysis of the untreated groundwater;

   b. The estimated average and maximum daily flow rates;

   c. A map showing the path from the point of initial discharge to the ultimate location of discharge;

   d. A list of known or suspected leaking underground tanks and other facilities or operations which have, or may have impacted the quality of the underlying groundwater.

   e. A discussion of the proposed cleanup project including a review of the extraction system design and the status of definition of free product and dissolved product plumes;

   f. A description of the proposed treatment system and a certification report on the adequacy of each component of the proposed treatment system along with the associated operation. This certification report shall contain a requirement-by-requirement analysis, based on accepted engineering practice, of how the process(es) and physical design(s) of the treatment system will ensure compliance with this order. The design engineer shall affix his/her signature and engineering license number to this certification report. The report(s) shall also certify the following:

      (1) all treatment facility startup and operation instruction manuals are adequate and available to operating personnel;

      (2) all treatment facility maintenance and testing schedules are included in the treatment facility operation and maintenance manual (O&M Manual) which shall be kept readily accessible to onsite operating personnel; and

      (3) influent and effluent sampling locations and ports located in areas where samples representative of the waste stream to be monitored can be obtained.

   g. A discussion of a plan for the prevention of run-on, interception and diversion of runoff, and prevention of infiltration and runoff from contaminated soils stored on-site, if the discharge is associated with a groundwater remediation project and soils containing petroleum projects or other pollutants will be maintained on-site; and

4. Any other information deemed necessary by the Executive Officer.

I, Gerard J. Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on October 11, 1996.

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Gerard J. Thibeault

California Regional Water Quality Control Board
Santa Ana Region

Monitoring and Reporting Program No. 96-18
NPDES NO. CAG918001
for
Groundwater Cleanup Project
Santa Ana Region

A. MONITORING GUIDELINES:

1. All sampling, sample preservation, and analysis shall be performed in accordance with the latest edition of 40 CFR Part 136 "Guidelines Establishing Test Procedures for the Analysis of Pollutants", promulgated by the United States Environmental Protection Agency, unless otherwise noted. In addition, the Board and/or EPA, at their discretion, may specify test methods which are more sensitive than those specified in 40 CFR 136.

2. All analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services or EPA or at laboratories approved by the Executive Officer of the Regional Board.

3. In conformance with federal regulations (40 CFR 122.45(c)), analyses to determine compliance with the effluent limitations for metals shall be conducted using the total recoverable method. However, in the event that individual concentration levels for lead show detectable amounts, the discharger shall also determine the individual dissolved metal concentration.

4. The discharger shall conduct acute toxicity testing on the effluent, using a control as specified in Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms (EPA/600/4-90/027F, August 1993). Static renewal tests of 100 % effluent shall be performed for 96 hours for the two test species corresponding to the effluent or receiving water salinity in the following table:

IF THE EFFLUENT OR RECEIVING WATER SALINITY IS :	TEST SPECIES	TEST
Less than 1,000 mg/l salinity	Fathead minnow, *Pimphales promelas*	Larval survival test
	Water flea, *Ceriodaphnia dubia*	Survival test
Equal to or greater than 1000 mg/l salinity	Silverside, *Menedia beryllina*	Survival test
	Pacific mysid, *Holmesimysis costata*	Survival test

The effluent tests must be conducted with concurrent reference toxicant tests[1]. Both the reference toxicant and the effluent tests must meet all test acceptability criteria as specified in the acute manual[2]. If the test acceptability criteria is not achieved, then the discharger must re-sample and re-test within 14 days. The test results must be reported according to the acute manual chapter on Report Preparation, and shall be attached to the monitoring reports. The use of alternative methods for measuring acute toxicity may be considered by the Executive Officer on a case-by-case basis. The use of the most sensitive test specie, in lieu of conducting both the required two tests species, may be considered/approved by the Executive Officer on a case-by-case basis upon submittal of the documentation supporting the discharger's determination of the most sensitive test specie.

5. All analytical data shall be reported with method detection limits (MDLs) and with identification of either practical quantitation levels (PQLs) or limits of quantitation (LOQs).

6. Laboratory data must quantify each constituent down to the Practical Quantitation Levels specified in Attachment "A". Any internal quality control data associated with the sample must be reported when requested by the Executive Officer. The Regional Board will reject the quantified laboratory data if quality control data is unavailable or unacceptable.

7. The discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. Duplicate chemical analyses must be conducted on a minimum of ten percent (10%) of the samples, or at least one sample per month, whichever is greater. A similar frequency shall be maintained for analyzing spiked samples. When requested by the Board or EPA, the discharger shall participate in the NPDES discharge monitoring report QA performance study. The permittee must have a success rate equal to or greater than 80%.

8. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.

9. The flow measurement system shall be calibrated at least once per year or more frequently, to ensure continued accuracy.

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1 *If a reference toxicant test is routinely performed by the toxicity testing laboratory on at least a once per month basis, the required concurrent reference toxicant testing is not necessary.*

2 *"Acute manual" refers to protocols described in "Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms" (EPA) 600/4-90-027F, August 1993)*

10. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Influent samples shall be taken at each point of inflow to the treatment system and shall be representative of the influent to the treatment system. Effluent samples shall be taken downstream of the last addition of waste to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters.

11. Whenever the discharger monitors any pollutant more frequently than is required by this order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the discharge monitoring report specified by the Executive Officer.

12. The discharger shall assure that records of all monitoring information are maintained and accessible for a period of at least five years from the date of the sample, report, or application. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or by the request of the Board at any time. Records of monitoring information shall include:

    a. The date, exact place, and time of sampling or measurements;
    b. The individual(s) who performed the sampling, and/or measurements;
    c. The date(s) analyses were performed;
    d. The individual(s) who performed the analyses;
    e. The analytical techniques or methods used;
    f. All sampling and analytical results;
    g. All monitoring equipment calibration and maintenance records;
    h. All original strip charts from continuous monitoring devices;
    i. All data used to complete the application for this order; and,
    j. Copies of all reports required by this order.

13. Discharge monitoring data shall be submitted in a format acceptable by the Board. Specific reporting format may include preprinted forms and/or electronic media. Unless otherwise specified, discharge flows shall be reported in terms of daily average discharge flows. The results of all monitoring required by this order shall be reported to the Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this order.

14. The discharger shall deliver a copy of each monitoring report in the appropriate format to:

    a. California Regional Water Quality Control Board
       Santa Ana Region
       3737 Main Street, Suite 500
       Riverside, CA 92501-3339

15. Weekly samples shall be collected on a representative day of each week.

16. Monthly samples shall be collected on a representative day of the month.

17. Semi-Annual samples shall be collected at the initiation of the project for the first sample and during January and July thereafter.

18. Annual samples shall be collected on the month the discharge authorization letter was issued.

B. INFLUENT MONITORING

A grab[3] sample of the influent to the treatment system shall be monitored on a monthly basis for total petroleum hydrocarbon, benzene, toluene, xylenes, ethylbenzene, tetrachlorethylene (PCE), trichloroethylene (TCE), 1,1-dichloroethane (1,1-DCA), and 1,1,1-trichloroethane (1,1,1-TCA), 1,1-dichloroethylene (1,1-DCE), 1,2-dichloroethylene (1,2-DCE), chloroform, and methyl tertiary butyl ether (MTBE).

C. EFFLUENT MONITORING

1. The following shall constitute the effluent monitoring program:

CONSTITUENT	TYPE OF SAMPLE	UNITS	MINIMUM FREQUENCY OF SAMPLING & ANALYSIS
Flow	------	GPD	Daily
Total Petroleum Hydrocarbons	Grab[2]	µg/l	Weekly
Benzene	"	"	"
Toluene	"	"	"
Xylene	"	"	"
Ethylbenzene	"	"	"
Total Lead	"	"	"
Total Phenols	"	"	"
Acrolein	"	"	"
Acrylonitrile	"	"	"
Bromoform	"	"	"
Carbon Tetrachloride	"	"	"
Chlorobenzene	"	"	"

3 *A "grab" sample is defined as any individual sample collected in less than 15 minutes.*

CONSTITUENT	TYPE OF SAMPLE	UNITS	MINIMUM FREQUENCY OF SAMPLING & ANALYSIS
Chlorodibromomethane	Grab[2]	µg/l	Weekly
Chloroethane	"	"	"
Chloroform	"	"	"
Dichlorobromomethane	"	"	"
Ethylene Dibromide (EDB)	"	"	"
Methyl Bromide	"	"	"
Methyl Chloride	"	"	"
Methylene Chloride	"	"	"
Methyl Tertiary Butyl Ether (MTBE)	"	"	"
Tetratchloroethylene (PCE)	"	"	"
Trichloroethylene (TCE)	"	"	"
Vinyl Chloride	"	"	"
2-Chloroethylvinyl Ether	"	"	"
1,1-Dichloroethane (1,1-DCA)	"	"	"
1, 2 - Dichloroethane	"	"	"
1,1-Dichloroethylene (1,1-DCE)	"	"	"
1,2-Dichloroethylene (1,2-DCE)	"	"	"
1, 2 - Dichloropropane	"	"	"
1, 3 - Dichloropropylene	"	"	"
1, 2 - Trans Dichloroethylene	"	"	"
1,1,1-Trichloroethane (1,1,1-TCA)	"	"	"
1, 1, 2 - Trichloroethane	"	"	"
1, 1, 2, 2 - Tetrachloroethane	"	"	"
Total Residual Chlorine[4]	"	"	"
Hardness	"	"	"

4 *If chlorine is used for treatment or disinfection of wastes.*

CONSTITUENT	TYPE OF SAMPLE	UNITS	MINIMUM FREQUENCY OF SAMPLING & ANALYSIS
Suspended Solids	Grab[2]	µg/l	Weekly
Sulfide	"	"	weekly
Total Dissolved Solids	"	"	monthly
Total Inorganic Nitrogen (TIN)	"	"	monthly
Toxicity Testing (see paragraph A.4., above.)	Grab	% survival	At the initiation of the project and annually thereafter (see paragraph A.18., above)

D. REPORTING :

Reporting shall be in accordance with the following:

1. All monitoring reports, or information submitted to the Regional Board shall be signed and certified in accordance with 40 CFR 122.22.

2. All reports shall be arranged in a tabular format to clearly show compliance or noncompliance with each discharge limitation.

3. If no discharge occurs during the previous monitoring period, a letter to that effect shall be submitted in lieu of a monitoring report.

4. If noncompliance is being reported, the reasons for such noncompliance shall be stated plus an estimate of the date when the discharger will be in compliance. The discharger shall notify the Board by letter when compliance with the time schedule has been achieved.

5. Noncompliance Reporting

    a. The discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided to the Executive Officer (909-782-4130) and the Office of Emergency Services (1-800-852-7550), if appropriate, as soon as the discharger becomes aware of the circumstances. A written report shall be submitted within 5 days and shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

b. Any violation of a maximum daily discharge limitation for any of the pollutants listed in this order shall be included as information that must be reported within 24 hours.

c. The Regional Board may waive the above required written report on a case-by-case basis.

6. Except for data determined to be confidential under Section 308 of the CWA5, all reports prepared in accordance with terms the of this order shall be available for public inspection at the offices of the Regional Water Quality Control Board and the Regional Administrator of EPA. As required by the CWA, effluent data shall not be considered confidential.

7. Monitoring reports shall be submitted by the 30th day of each month following the monitoring period and shall include:

a. The results of all chemical analyses for the previous month, and annual samples whenever applicable,

b. The daily flow data,

c. A summary of the month's activities including a report detailing his compliance or noncompliance with the task for the specific schedule date, and

d. For every item where the requirements are not met, the discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time and submit a timetable for correction.

All reports shall be signed by a responsible officer or duly authorized representative of the discharger and shall be submitted under penalty of perjury.

Ordered by _____

Gerard J. Thibeault
Executive Officer

October 11,1996

5 *Clean Water Act*

Attachment "A"
M&RP No. 96-18, NPDES No. CAG918001

PRACTICAL QUANTITATION LEVELS FOR COMPLIANCE DETERMINATION

	Constituent	PQL µg/l	Analysis Method
1	Arsenic	7.5	GF/AA
2	Barium	20.0	ICP/GFAA
3	Cadmium	15.0	ICP
4	Chromium (VI)	15.0	ICP
5	Cobalt	10.0	GF/AA
6	Copper	19.0	GF/ICP
7	Cyanide	50.0	335.2/335.3
8	Iron	100.0	ICP
9	Lead	26.0	GF/AA
10	Manganese	20.0	ICP
11	Mercury	0.50	CV/AA
12	Nickel	50.0	ICP
13	Selenium	14.0	GF HYDRIDE GENERATION
14	Silver	16.0	ICP
15	Zinc	20.0	ICP
16	1,2 - Dichlorobenzene	5.0	601/602/624
17	1,3 - Dichlorobenzene	5.0	601
18	1,4 - Dichlorobenzene	5.0	601
18	2,4 - Dichlorophenol	10.0	604/625
20	4 - Chloro -3- methylphenol	10.0	604/625
21	Aldrin	0.04	608
22	Benzene	1.0	602/624
23	Chlordane	0.30	608
24	Chloroform	5.0	601/624
25	DDT	0.10	608
26	Dichloromethane	5.0	601/624
27	Dieldrin	0.10	608
28	Fluorantene	10.0	610/625
29	Endosulfan	0.50	608
30	Endrin	0.10	608
31	Halomethanes	5.0	601/624
32	Heptachlor	0.03	608
33	Hepthachlor Epoxide	0.05	608
34	Hexachlorobenzene	10.0	625
35	Hexachlorocyclohexane		
	Alpha	0.03	608
	Beta	0.03	608
	Gamma	0.03	608
36	PAH's	10.0	610/625
37	PCB	1.0	608
38	Pentachlorophenol	10.0	604/625
39	Phenol	10.0	604/625
40	TCDD Equivalent	0.05	8280
41	Toluene	1.0	602/625
42	Toxaphene	2.0	608
43	Tributyltin	0.02	GC
44	2,4,6-Trichlorophenol	10.0	604/625

California Regional Water Quality Control Board
Santa Ana Region

NOTICE OF INTENT

TO COMPLY WITH THE TERMS AND CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE TREATED GROUNDWATER POLLUTED BY PETROLEUM HYDROCARBONS, SOLVENTS AND/OR PETROLEUM HYDROCARBONS MIXED WITH METALS AND OR SOLVENTS
(Order No. 96-18, NPDES No. CAG918001)

I. PERMITTEE (*Person/Agency Responsible for the Discharge*)

Agency/Company Name:_____

Address:_____

Street *City* *State* *ZIP*

Contact Person:_____ Phone:_(_____)_____

II. FACILITY

Name:_____

Location:_____

Street *City* *State* *ZIP*

Contact Person:_____ Phone:_(_____)_____

III. BILLING INFORMATION (*Where annual fee invoices should be se*nt)

Agency/Company Name:_____

Address:_____

Street *City* *State* *ZIP*

Contact Person:_____ Phone:_(_____)_____

IV. INDICATE EXISTING PERMIT NUMBER: (*if applicable*)

a. Individual permit Order No. _____ NPDES No. _____

b. General Permit Order No. 91-63-_____

V. CERTIFICATION:

I certify under penalty of law that I am an authorized representative of the permittee and that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the permittee will comply with the terms and conditions stipulated in Order No. 96-18 including the monitoring and reporting program issued by the Executive Officer of the Regional Board.

Name and Official Title:_____
(type or print)

Signature: _____ Date: _____

Remarks: *If changes to facility ownership and/or treatment processes were made after the issuance of the existing permit, please provide a description of such changes on another sheet and submit it with this Notice of Intent.*